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ABSTRACT

A review of 10 major studies, conducted since 1976, assessing the effectiveness of Title VII bilingual education programs suggest that bilingual education is a viable instructional program for children of limited English-speaking ability. The studies examined are: "Bilingual Education: An Appraisal of Empirical Research," Zappert and Cruz; "Effectiveness of Bilingual Education: A Review of the Literature," Baker and de Kanter; "Political Experience on Educational Research: An Analysis of Baker and de Kanter's Review of the Literature of Bilingual Education," Seidner; "Baker de Kanter Review: Inappropriate Conclusions on the Efficacy of Bilingual Education," Yates; "Evaluation of the Impact of ESEA Title VII Spanish/English Bilingual Education Program," American Institute for Research; "The AIR Evaluation of the Impact of ESEA Title VII Spanish/English Bilingual Education Programs: An IDRA Response," Intercultural Development Research Association; "Longitudinal Study: Title VII Program Sante Fe Public Schools," California State University, Los Angeles; "An Evaluation of Bilingual Education Instructional Program Administered in Michigan: 1979-80 School Year," Michigan Department of Education-Bilingual Education Office; "Bilingual/Bicultural Education: The Colorado Success Story," Egan and Goldsmith; "Texas Bilingual Education Programs Demonstrate Their Effectiveness," Jackson. Only the American Institute for Research report and the Baker and de Kanter study gave negative findings and the validity of these reports has been challenged. (NEC)

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MAJOR FINDINGS ON THE EFFECTIVENESS OF BILINGUAL EDUCATION

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MAJOR FINDINGS ON THE EFFECTIVENESS OF BILINGUAL EDUCATION

Tadeo Reyna

In 1976 the Commissioner of Education reported to the President and Congress that nationwide evaluation studies on the effectiveness of Title VII bilingual education projects were not available in the literature (U.S. Department of Health, Education and Welfare - Office of Education, 1976). Since that time, efforts have been made to study the effectiveness of bilingual education. Some of the major studies have been conducted by Zappert and Cruz (1977), Baker and de Kanter (1980), American Institute for Research (AIR) (1977), and the Santa Fe Public Schools (1978). Other studies have been conducted in California (1980), Michigan (1981), Colorado (1981), and Texas (1981).

Zappert and Cruz (1977) reviewed 184 research studies and project evaluations on the effectiveness of bilingual education. Of these, 172 were rejected because they lacked a sound research design. Sixty-six findings from the remaining studies and evaluations were reported. The results indicated that "fifty-eight percent of the findings were positive, forty-one percent were neutral and only one percent was negative" (Zappert & Cruz, 1977, p. 39).

Zappert and Cruz (1977) concluded that bilingual education is an effective medium of instruction. The authors further

concluded that additional research is needed on the long range effects of bilingual education to better assess its effectiveness.

The Office of Planning, Budget and Evaluation in the U.S. Department of Education conducted a study on the effectiveness of bilingual education (Baker & de Kanter, 1981). Of over 300 documents analyzed, only 28 were methodologically acceptable for analysis. The other studies were rejected as being of poor quality, especially Title VII evaluation reports.

In the studies comparing the effectiveness of a transitional bilingual education program to a submersion program in second language acquisition, "10 findings were positive; 15 had no significant difference and 5 had negative results" (Baker & de Kanter, 1981, p. 14 abstract). The studies that compared transitional bilingual education program with an English as a second language program in second language acquisition resulted in "1 positive finding, 3 findings with no significant differences and 1 finding with negative results" (Baker & de Kanter, 1981, p. 14 abstract). Comparisons of transitional bilingual education programs with an immersion program in second language aquisition concluded "none were positive, one has no significant difference and one had negative results" (Baker & de Kanter, 1981, p. 14 abstract). Only one study concerning an immersion program versus an English as a second language program in second language acquisition "nad positive results" (Baker & de Kanter, 1981, p. 14 abstract).

One of the conclusions cited in the government analysis of the studies was that "schools can improve the achievement level of language-minority children through special programs (Baker & de Kanter, 1981, p. 1 abstract). Another conclusion was that each school district should decide what type of special program is best suited for that school district since "the case for the effectiveness of a transitional bilingual education is so weak that exclusive reliance on this instruction method is not clearly justified" (Baker & de Kanter, 1981, p. 1 abstract). The study also concluded that "immersion programs, which involve structured curriculums in English for both language and non-language subject areas, show promising results and should be given more attention in program development" (Baker & de Kanter, 1981, p. 1 abstract).

Responding to the Baker and de Kanter (1981) study, Seidner (1981) identified seven areas of concern with the study. These were:

1. . . . Baker and de Kanter failed to check the validity of their definitions with the reality of practices in programs which they selected, nor correct for any potential inconsistencies (their defintion fails to account for such differences as time and treatment, for example) (Seidner 1981, p. 5).

2. The role of rigorous researchers, as it is selectively applied by Baker and de Kanter, is ludicrous by virtue of their failure to recognize differences of research purposes and methodology among studies (Seidner 1981, p. 18).

3. An analysis of their secondary review, however, shows attempts by the authors to "bend" the data to fit their research questions . . . the collection of studies indicates a review of literature which touches upon their research questions by selective interpretation and inference--not by

substantial research which has been collected by original and careful design (Seidner 1981, p. 9).

4. The authors at first state what appears on the surface to be rigorous criteria for selection, and then mention . . . that the criteria for methodological soundness were applied in a way that recognized that a design weakness in one area can be compensated by a strength in another area (Seidner 1981, p. 11).

5. . . . the authors: a) present incomplete and selective data [errors of omission] and b) present a biased interpretation of studies which do appear (Seidner 1981, p. 13).

6. . . . the author's sense and selective application of statistics . . . (Seidner 1981, p. 17). Baker and de Kanter approached one study which tended on face value to discredit their arguments, with a less than balanced treatment of the researcher's application of the statistical process (Seidner 1981, p. 18).

7. Very powerful evidence suggests that Baker and de Kanter indeed provided a political agenda, apparently aimed at discrediting the bilingual education movement in the United States (Seidner 1981, p. 20).

Another response to the inappropriate conclusions of the Baker and de Kanter (1981) study was prepared by a University of Texas research team headed by James Yates (1982). The report cites the following errors in the procedures and methodologies used by Baker and de Kanter in the selection of the 28 studies cited in their review on the effectiveness of bilingual education.

1. Non-random assignment of subjects and/or procedures which would result in non-equivalent groups - 21 instances.

2. High attrition of subjects - 5 instances.

3. Discrepancy in size of n or very small n - 8 instances.

4. Inappropriate measurement instruments and/or procedures - 26 instances.

5. Time frame of pre,'post - testing inappropriate - 8 instances.

6. Inconsistent design implementation/inconsistent treatment - 35 instances.

7. Lack of control of known critical learning variables - 10 instances.

8. Different standards/qualifications of instructional personnel - 14 instances.

9. Lack of recency of studies cited; 25% of studies were ten or more years old; 40% of the studies were more than five years old (Yates et al, 1982, pp. 7-11).

A study evaluating the impact of Title VII Spanish/English bilingual programs was conducted with a national sample by the American Institute for Research (AIR). The experimental group consisted of 5,800 Title VII students and the comparison group had 2,400 non-Title VII students (Danoff et al., 1978). The students were enrolled in grade levels two through six in 37 project sites. All of the selected sites were in the fourth or fifth year of implementing a bilingual program (Danoff et al., 1978).

The results of the study indicated that:

1. . . . the overall-across-grade total Title VII student analyses showed that Title VII does not appear to be having a consistent, significant impact in meeting its goals as set forth in the legislation.

2. Across grades, when total Title VII and non-Title VII comparisons were made, the Title VII students in this study appear to be doing poorer in English than Non-Title VII students.

3. In terms of mathematics across grades, they appear to be performing about the same as non-Title VII students (Danoff et al. 1978, p. xlviii).

Immediately after the interim report was released by the U.S. Office of Education, an analysis of the largest and most comprehensive study on the effectiveness of bilingual education was conducted by the Intercultural Development Research Association (IDRA, 1977). The response to the AIR report focused on sixteen major discrepancies.

These were:

1. Language classifications were done subjectively by teachers in spite of a body of research which points to the unreliability of teacher judgement as an indicator of the language characteristics of students.

2. One-half of the teachers classifying students in the various language categories did not speak any language other than English.

3. The classification, "limited English-speaking ability," included only students who spoke no English whatsoever. . .

4. Comparison groups used as a standard for comparing the performance of Title VII children were "nominated" by Title VII personnel. . .

5. District Title VII personnel were allowed to nominate groups to be used for comparisons from classrooms outside of their own. . .

6. About one-third of the non-Title VII teachers and aides were involved in a bilingual program. This raises the possiblity that the comparison groups had "bilingual treatment" thus invalidating them as a comparison . . .

7. Eighteen out of the thirty-seven projects compared [almost 50%] were unable to identify a comparison site. . .

8. Measures of English reading ability were obtained by the use of an English language achievement test given to Spanish monolingual children "just learning to read and write in English."

9. A very large number of children classified as Spanish monolingual did not take the various reading subtests. . .

10. . . . only six of the thirty-seven projects involved more than six months, and eighteen of the projects [almost 50%] were pre-post tested within a span of five months or less.

11. . . . the study concludes that most bilingual programs are of the maintenance type. "Maintenance" is not defined.

12. Program characteristics varied considerably as to instructional time, content, and instructional methodologies. Impact findings did not control for such differences.

13. IDRA secondary analysis of the AIR data shows that only 26% of the teachers participating in the study reported having a bilingual teaching credential . . .

14. . . . IDRA analysis of the individualized project descriptions revealed that 6.6% of the teachers involved in the Title VII programs received no training whatsoever and 7.4% received one day or less . . .

15. Analysis of the study indicated that 49.6% [almost one-half] of the teachers in the Title VII bilingual programs admit to not being proficienct in the other language!

16. . . . Conclusions reached did not consider bilingual Title VII funds versus other bilingual funds, developmental costs versus operational, and first year versus continuation program cost (IDRA 1977, p. ii).

With sixteen areas of concern identified by an independent analysis of the AIR report, it is difficult to accept all of the findings of the report at face value.

The Santa Fe, New Mexico, Public Schools' study (1978) of its bilingual education program was produced in response to the AIR report. Previously, the AIR research firm had identified the Santa Fe bilingual program as one of seven exemplary programs, yet this program was not used in the AIR report (Santa Fe Public Schools, 1978, p. i). The Santa Fe study was a six-year study which began with grade one in 1970-71. With slight variations

from year to year, there were approximately 25 students in the experimental group and the same number in the comparison group. The Metropolitan Achievement Tests in reading and mathematics were used throughout the study. The results of the study were:

1. The Title VII students showed over time increasing capability in English language skills [especially in reading].

2. The Title VII students over time in the majority of cases outperformed the non-Title VII students in reading and mathematics, and

3. The Title VII students over time surpassed and/or matched national norms (longitudinal group) in reading and mathematics (Santa Fe Public Schools 1978, p. ii).

The California research project was initiated in March 1978 to evaluate the effectiveness of bilingual education. This study was conducted at 74 sites located in 15 school districts with 10,121 pupils. Achievement test scores from 1978, 1979, and 1980 were used to analyze achievement in bilingual education programs. The results of the study indicated that:

> The students in bilingual programs and in these arrangements through which a primary language class was taught, when implementation was appropriately carried out, scored as well or better on the English achievement tests than did those that were in non-bilingual English education. And the student's learning of two languages had the added advantage of improving their skills in the other languages (Jones et al. 1980, p. 26).

Students who received reading instruction in both languages at the same time "scored as well or better than the control group" (Jones et al., 1980, p. 26). The study, however, could not show evidence on the transferability of reading skills from one

language to the other. The findings suggested that literate bilingual and trilingual students had a general learning advantage over nonbilinguals (Jones et al., 1980, p. 36). Students for whom English instruction was developed one or more years "were severely disadvantaged in English and there was no evidence that their Spanish scores were better than those students who learned reading in both languages at the same time" (Jones et al., 1980, p. 36).

Michigan is another state that has conducted a state wide assessment of its bilingual programs. The study was conducted in 1979-80. Fifty-six projects involving 12,512 students in grades K-12 were assessed. Forty-one projects were Spanish/English; the remainder were divided among Arabic, Chaldean, Vietnamese, Italian, Albanian, Ojibwa, Korean, Russian, Macedonian, Greek, Serbo-Crotian, Polish, Tagalog, German, French, and Farsi.

The results from 25 of the districts that had usable data indicated that the "average rate of gain in English reading achievement was 4.81 Normal Curve Equivalent (NCE) units" (Michigan Department of Education - Bilingual Education Office, 1981, p. 18). The average rate of gain "in mathematics was 5.58 NCE units" (Michigan Department of Education - Bilingual Education Office, 1981, p. 18). The results show that "on the average, bilingual students were learning at a higher rate of achievement than the average student, nationally, at their grade level" (Michigan Department of Education - Bilingual Education Office, 1981, p. 18).

In the state of Colorado, a statewide study was conducted in 1981 utilizing achievement data from 1977-78, 1978-79, and 1979-80. Ninety-three percent of the school districts with bilingual programs responded with usable data. The achievement score analyses were based on Normal Curve Equivalent scores. The results of the study listed below support the success of bilingual education in Colorado:

1. At the kindergarten level, all reporting programs either maintained or significantly increased [achievement] for both linguistically different students (LDs) and non-linguistically different students (NLDs).

2. At the first grade level, 23 of 24 programs reported no change or significantly increased achievement for LDs while 20 of 21 programs reported the same results for NLDs.

3. At the second grade level, 30 of 33 programs showed maintained or significantly increased achievement for LDs; 23 of 28 showed the same for NLDs.

4. For grade three, 29 of 31 programs reported achievement for LDs as maintained or as significantly increased while all programs indicated maintained or increased achievement for NLDs (Egan and Goldsmith, 1981, p. 30).

The success story in Colorado is significant because it clearly shows that children involved in bilingual education programs benefit from the program.

In Texas, Jackson (1981) did a synthesis of bilingual education program evaluation reports from selected school districts. These school districts were: (1) San Marcos; (2) Bishop; (3) Crystal City; and (4) New Braunfels. The data analyzed were derived from the 1979-80 school year. The conclusions were as follows:

1. San Marcos ISD - students . . . were found to be 'catching up' with their fluent English-speaking peers.

2. Bishop ISD - by the end of their second year . . ., LEP students as a group had generally reached or surpassed the 40th percentile in both English and Spanish.

3. Crystal City ISD - by the end of the third grade, 5.5 percent of the LEP students had transitioned into the districts 'mainstream' English program . . . by the end of the fifth grade 80 percent [of the students] had made the transition.

4. New Braunsfels ISD - by the end of the first year, the bilingual group had equalled the English-only group in English reading [36th percentile for both groups] and had surpassed it in the English language [40th versus 30th percentile](Jackson, 1981, pp. 1-2).

Prior to 1976, no studies existed on the effectiveness of Title VII bilingual education projects. Since 1976, several major studies have emerged on the effectiveness of bilingual education. These studies have included: (1) Zappert and Cruz (1977); (2) Baker and de Kanter (1981); (3) AIR Report (1978); and the Santa Fe Public Schools study (1978). Some states have also conducted studies on the effectiveness of bilingual education. These include: (1) the California study by James et al. (1980); (2) the Michigan study by the Michigan Department of Education - Bilingual Education Office (1981); (3) the Colorado Study by Egan and Goldsmith (1981); and (4) the Texas study by Jackson (1981). The studies have included thousands of children and hundreds of bilingual education programs. Only the AIR Report (1978) and the Baker and de Kanter (1981) study suggest that bilingual education is not a viable instructional program for children of limited English-speaking ability. However, as previously discussed, the validity of these reports has been challenged because of weaknesses in their research designs.

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